

CLAIMS

1. A process for preparing breathable, elastic polyolefin films, including the steps of:
 - blow molding a mixture of olefins, styrenic thermoplastic elastomers and filler to facilitate the generation of porosity by stretching;
 - squeezing the tubular to obtain a flat film;
 - heating the flat film to the softening point;
 - pressing the flat film;
 - cooling the flat film to a temperature of 8 to 30°C;
 - stretching the film in the transverse and/or longitudinal directions to make it breathable.
2. A process as claimed in claim 1, further comprising the steps of:
 - coupling a separating material to the breathable elastic film;
 - winding the film coupled with the separating material, into a roll.
3. A process as claimed in claim 1 or 2, wherein said mixture comprises 30% to 70% by weight fillers, 10% to 40% by weight styrenic thermoplastic elastomers and 10% to 50% by weight olefins.
4. A process as claimed in claim 1, 2 or 3, wherein said separating material has a continuous structure.
5. A process as claimed in claim 4, wherein said separating material is a paper or nonwoven fabric film.
6. A process as claimed in claim 5, wherein said paper or nonwoven fabric film is coupled to said extruded film by an adhesive.
7. A process as claimed in claim 5, wherein said paper or nonwoven fabric film is coupled to said extruded film (11) without using adhesives.
8. A process as claimed in claim 1, 2 or 3, wherein said separating layer has a discontinuous structure.

9. A process as claimed in claim 8, wherein said separating layer is made of a powdered material.
10. A plant for producing a breathable elastomeric polyolefin film, including, in succession:
- a blow molding extruder (1) for extruding a tubular (11);
 - a calender (2) for squeezing the extruded tubular (11) fed from the blow molding extruder;
 - means (3, 4) for heating the squeezed extruded tubular film to the softening point;
 - a calender (5) to press the film that was previously heated to the softening point;
 - means (5) for cooling the compressed film to a temperature of 8 to 30°C;
 - means (6, 8) for stretching the film (11) in the transverse and/or longitudinal directions;
 - means (6, 8) for stretch stabilization by cooling the extruded film (11);
11. A plant as claimed in claim 10, which further includes:
- means (12, 13, 14) for coupling the extruded film (11) to a separating material;
 - a reeling machine (9) for winding the film (11) coupled to said separating material into a roll (18).
12. A use of a mixture of olefins, styrenic thermoplastic elastomers and filler to produce a breathable elastic film.
13. A use of a mixture as claimed in claim 12, wherein the amount of styrenic thermoplastic elastomers is of 10% to 40% by weight, the amount of filler is of 30% to 70% by weight and the amount of olefins is of 10% to 50% by weight.

AMENDED CLAIMS

[received by the International Bureau on 22nd April 2005 (22.04.2005);
original claims 1-13 replaced by new claims 1-11]

+ STATEMENT

1. A process for preparing breathable, elastic polyolefin films, including the steps of:
 - blow molding a mixture of olefins, styrenic thermoplastic elastomers and filler to facilitate the generation of porosity by stretching;
 - squeezing the tubular to obtain a flat film composed of two superposed layers;
 - heating the flat film to the softening point;
 - pressing the flat film in order to join the two original layers together;
 - cooling the flat film to a temperature of 8 to 30°C;
 - stretching the film in the transverse and/or longitudinal directions to make it breathable.
2. A process as claimed in claim 1, further comprising the steps of:
 - coupling a separating material to the breathable elastic film;
 - winding the film coupled with the separating material, into a roll.
3. A process as claimed in claim 1 or 2, wherein said mixture comprises 30% to 70% by weight fillers, 10% to 40% by weight styrenic thermoplastic elastomers and 10% to 50% by weight olefins.
4. A process as claimed in claim 1, 2 or 3, wherein said separating material has a continuous structure.
5. A process as claimed in claim 4, wherein said separating material is a paper or nonwoven fabric film.
6. A process as claimed in claim 5, wherein said paper or nonwoven fabric film is coupled to said extruded film by an adhesive.
7. A process as claimed in claim 5, wherein said paper or nonwoven fabric film is coupled to said extruded film (11) without using adhesives.

8. A process as claimed in claim 1, 2 or 3, wherein said separating layer has a discontinuous structure.
9. A process as claimed in claim 8, wherein said separating layer is made of a powdered material.
10. A plant for producing a breathable elastomeric polyolefin film, including, in succession:
 - a blow molding extruder (1) for extruding a tubular (11);
 - a calender (2) for squeezing the extruded tubular (11) fed from the blow molding extruder in order to obtain two superposed layers;
 - means (3, 4) for heating the squeezed extruded tubular film to the softening point;
 - a calender (5) to press the film that was previously heated to the softening point in order to join the two original layers together;
 - means (5) for cooling the compressed film to a temperature of 8 to 30°C;
 - means (6, 8) for stretching the film (11) in the transverse and/or longitudinal directions;
 - means for stretch stabilization by cooling the extruded film (11);
 - means (12, 13, 14) for coupling the extruded film (11) to a separating material;
 - a reeling machine (9) for winding the film (11) coupled to said separating material into a roll (18).
11. A use of a mixture of olefins, styrenic thermoplastic elastomers and filler to produce a breathable elastic film wherein the amount of styrenic thermoplastic elastomers is of 20% to 30% by weight, the amount of filler is of 30% to 70% by weight and the amount of olefins is of 27% to 34% by weight.

STATEMENT UNDER ARTICLE 19(1) PCT

New claim 1 comprises the subject matter of original claim 1 and features derivable directly and unambiguously from the original description (see page 4 last paragraph and page 5 lines 16-19).

Claim 2 is unchanged.

Claim 3 is unchanged.

Claim 4 is unchanged.

Claim 5 is unchanged.

Claim 6 is unchanged.

Claim 7 is unchanged.

Claim 8 is unchanged.

Claim 9 is unchanged.

New claim 10 comprises the subject matter of original claims 10, 11 and features derivable directly and unambiguously from the original description (see page 4 last paragraph, page 5 lines 16-19 and page 6 lines 13-14).

New claim 11 comprises the subject matter of original claim 12, 13 and features derivable directly and unambiguously from the original description (see page 3 lines 9-10, lines 21-22 and lines 22-25).